

REMARKS

Claims 37-72 were previously pending in the application. Claims 37-72 are cancelled and replaced with new claims 73-85.

The new claims are believed patentable over the cited prior art for at least the following reasons.

Claim 73 provides that a vertical bipolar transistor is formed on a semiconductor substrate for discharging accumulated electric charge of a pad from a surface layer of the semiconductor substrate towards a depth direction of the semiconductor substrate.

LI et al. 5,623,387 teach a horizontal bipolar transistor that discharges accumulated electric charge along a surface layer.

Claim 73 further provides that the vertical bipolar transistor has a collector and a base formed in a same region using a same mask.

MAEDA 5,471,082 teaches a buried collector 2a and a base 6a. As disclosed on column 10, lines 45-47 in conjunction with Figures 2 and 3 of MAEDA, region 2 is formed using mask 4 and region 6a is formed using mask 5.

Neither the addition of MCCULRE et al. 5,774,318, nor SEDRA et al., Textbook, Microelectronic Circuits nor KINUSAGA et al. 5,821,797 nor SHIGEHARA et al. 5,539,327 overcome the shortcomings of LI et al. and MAEDA. Accordingly, the new claims

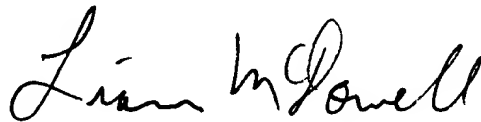
are believed to avoid the rejections under §103 and are patentable over the art of record.

In view of the present amendment and the foregoing remarks, it is believed that the present application has been placed in condition for allowance. Reconsideration and allowance are respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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